

# Notice of Allowability

Application No.

10/082,631

Examiner

John Pezzlo

Applicant(s)

SPRUYT ET AL.

Art Unit

2662

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to filed 6 August 2004.
2. ☒ The allowed claim(s) is/are 4-12 (renumbered 1-9 respectively).
3. ☒ The drawings filed on 22 February 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

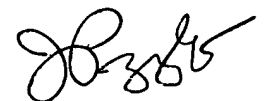
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**JOHN PEZZLO**  
**PRIMARY EXAMINER**

## **DETAILED ACTION**

### ***Allowable Subject Matter***

Claims 4-12 are allowable over the prior art of record.

### ***Reasons for Allowance***

Applicants have claimed the following uniquely distinct features in the instant invention which are not found in the prior art, either singularly or in combination.

1. Regarding claim 4 - A method for transmitting user data elements from a Digital Subscriber Line (DSL) transmitter to a Digital Subscriber Line receiver, wherein
  - a. said user data elements modulate at least one carrier,
  - b. a pilot carrier used for synchronization between said DSL transmitter and said DSL receiver is multiplexed with said at least one carrier,
  - c. said at least one carrier and said pilot carrier are transmitted over a transmission medium interconnecting said DSL transmitter and said DSL receiver, characterized in that said pilot carrier is modulated with part of said user data elements for enlarging effective bandwidth for transport of said user data elements.
2. Regarding claim 6 - A Digital Subscriber Line (DSL) transmitter, adapted to transmit user data elements to a Digital Subscriber Line receiver via a transmission medium, said DSL transmitter comprising:

a. a Discrete Multi Tone (DMT) modulator to an input of which said user data elements are applied, said DMT modulator being adapted to modulate said user data elements on at least one carrier, and to multiplex said at least one carrier with a pilot carrier used for synchronization between said DSL transmitter and said DSL receiver; and

b. a line interface, coupled between an output of said DMT modulator and an input of said transmission medium, and adapted to condition said at least one carrier and said pilot carrier to be transmitted over said transmission medium, characterized in that said DMT modulator is further adapted to modulate said pilot carrier with part of said user data elements for enlarging effective bandwidth for transport of said user data elements.

3. Regarding claim 10 - A Digital Subscriber Line (DSL) receiver, adapted to receive user data elements transmitted thereto by a Digital Subscriber Line transmitter via a transmission medium, said DSL receiver comprising:

a. a line interface, coupled to an output of said transmission medium and adapted to condition a signal transferred over said transmission medium to be applied to components of said DSL receiver, and

b. a Discrete Multi Tone (DMT) demodulator, an input of which is coupled to an output of said line interface, said DMT demodulator being adapted to demultiplex in said signal a pilot carrier from at least one further carrier, to demodulate a first part of said user data elements from said at least one further carrier, to demodulate a second part of said user data elements from said pilot carrier and to use the demodulated pilot carrier for synchronization, said pilot carrier enlarging effective bandwidth for transport of said user data elements.

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The closest prior art, either singularly or in combination, fail to anticipate or render the above limitations obvious.

***Conclusion***

Claims 4-12 being allowable, **Prosecution On The Merits Is Closed** in this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Pezzlo whose telephone number is (571) 272-3090. The examiner can normally be reached on Monday to Friday from 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C.

or faxed to:

(703) 872-9306

For informal or draft communications, please label "PROPOSED" or "DRAFT"

Hand delivered responses should be brought to:

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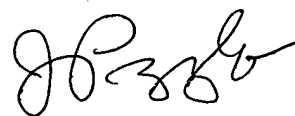
Jefferson Building

500 Dulany Street

Alexandria, VA.

John Pezzlo

6 October 2004

A handwritten signature in black ink, appearing to read 'J. Pezzlo', with a stylized flourish at the end.

**JOHN PEZZLO**  
**PRIMARY EXAMINER**